# BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.**

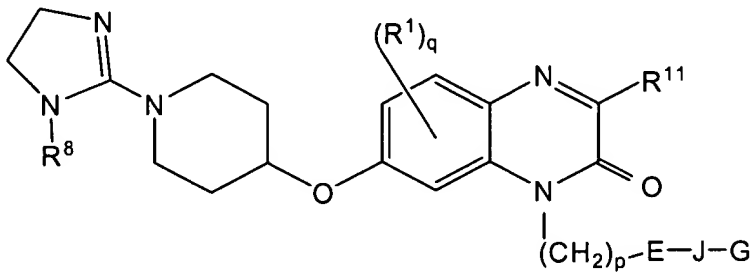
**Amendments to the Claims:**

Claims 5-16 are pending examination. Claims 9, 12-14 are amended. Claims 5-8 and 11 have been allowed.

**Listing of Claims:**

1.-4. (Canceled)

5. (Previously Presented) A compound of formula III:



(III)

wherein:

$R^8$ is selected from the group consisting of H, -OH, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S;

$R^1$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, halogen, polyhaloalkyl, $C_{0-8}$alkyl-C(=O)OH, $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl, -CN, -$NO_2$, $C_{1-8}$alkyl-OH, $C_{0-8}$alkyl-SH, -C(=O)$NR^2R^3$, -O-$R^2$ and -O-C(=O)$R^2$, an unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted amino groups are independently substituted by at least one member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, polyhaloalkyl, -$SO_2R^2$, $C_{0-8}$alkyl-C(=O)OH and $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl;

$R^2$ and $R^3$ are independently selected from the group consisting of H, -OH, $C_{1-8}$alkyl,

$C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S;

q is 0-3;

$R^{11}$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, $C_{1-6}$alkylaryl, $C_{1-6}$alkyl-$C_{3-8}$cycloalkyl, -O-$R^2$, -O-C(=O)$R^2$, -$C_{1-8}$alkyl-O-$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)$R^{10}$, -$C_{1-8}$alkyl-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-C(=O)N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}$C(=O)$R^{10}$, -S$R^{10}$, where $R^2$ is as described above and $R^{10}$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, and wherein when two $R^{10}$ groups are present they may be taken together to form a saturated or unsaturated ring with the atom to which they are both attached;

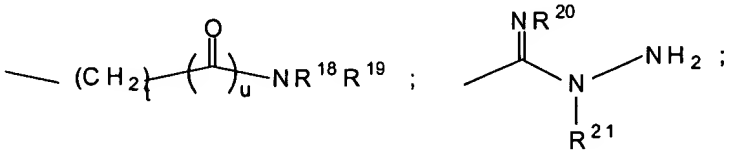
p is an integer from 0-2;

E is a member selected from the group consisting of a direct link, -O-, -N(-$R^{11}$)- , where $R^{11}$ is as set forth above, phenylene, a bivalent 5 to 12 member heteroaryl group having 1 to 4 heteroatoms selected from the group consisting of N, O and S, and a five to ten membered non-aromatic bivalent heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S, wherein said heteroaryl and said non-aromatic heterocyclic ring structure may be independently substituted by from 0 to 5 $R^{14}$ groups;

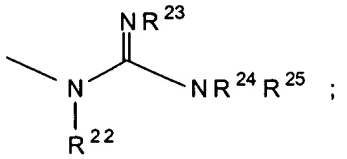
J is a member selected from the group consisting of a direct link, a bivalent $C_{3-8}$cycloalkyl group, phenylene, a 5 to 12 member bivalent heteroaryl group having 1 to 4 heteroatoms selected from the group consisting of N, O and S, and a five to ten membered non-aromatic bivalent heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S wherein said heteroaryl and said non-aromatic heterocyclic ring structure may be independently substituted by from 0 to 5 $R^{14}$ groups;

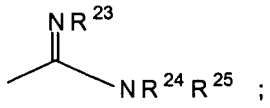
each $R^{14}$ group is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, halogen, polyhaloalkyl, $C_{0-8}$alkyl-C(=O)OH, $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl, -CN, -$NO_2$, $C_{1-8}$alkyl-OH, $C_{0-8}$alkyl-SH, -O-$R^2$ and -O-C(=O)$R^2$, an unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted amino groups are independently substituted by at least one member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, polyhaloalkyl, $C_{0-8}$alkyl-C(=O)OH and $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl;

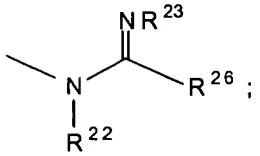
G is a member selected from the group consisting of: H; -CN; -$OR^{17}$;

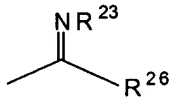

;


;

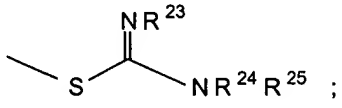

;


;


;



and


;

wherein

t is an integer from 0 to 6,

u is the integer 0 or 1, and $R^{17}$, $R^{18}$, $R^{19}$, $R^{20}$, $R^{21}$, $R^{22}$, $R^{23}$, $R^{24}$, $R^{25}$ and $R^{26}$ are independently selected from the group consisting of H, -OH, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where $R^{18}$ taken with $R^{19}$, $R^{22}$ taken with either of $R^{24}$ and $R^{25}$,

and $R^{24}$ taken with $R^{25}$, can each independently form a 5 to 6 membered heterocyclic ring having from 1 to 4 atoms selected from the group consisting of N, O and S;

with the proviso that when G is H, -CN, $-OR^{17}$, either E or J must contain at least one N atom;

or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.

6. (Original) A compound of claim 5, wherein $R^1$ and $R^8$ are independently a lower alkyl group and $R^{11}$ is hydrogen or is a $C_1$ to $C_8$ alkyl group.

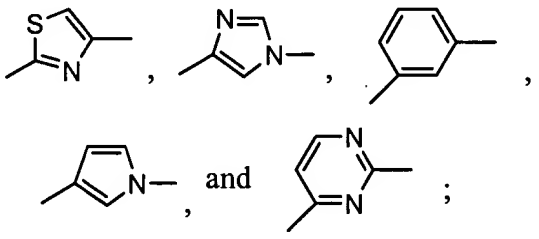
7. (Original) A compound of claim 5, wherein q is zero and $R^8$ is lower alkyl group.

8. (Original) A compound of claim 5, wherein:

$R^8$ is a methyl group;

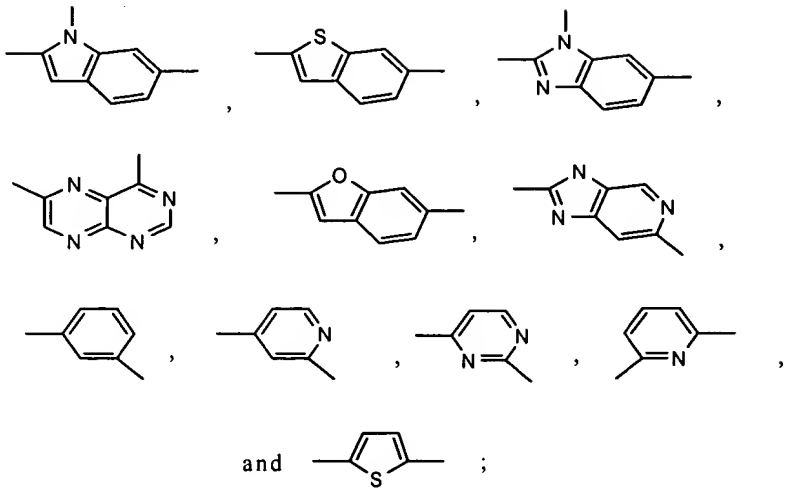
p is an integer from 1-2;

E is selected from the group consisting of: a direct link,

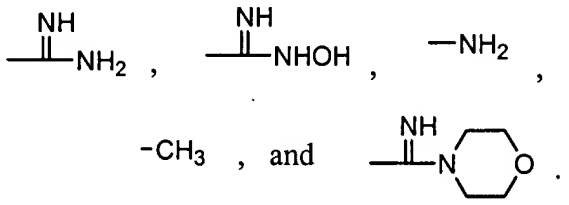



;

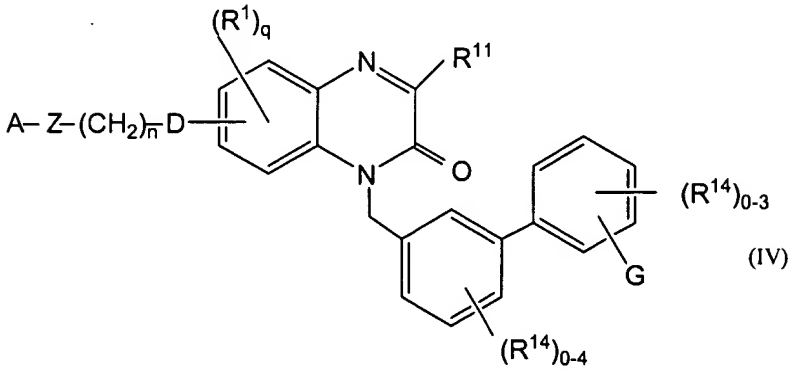
J is selected from the group consisting of:



and G is selected from the group consisting of:



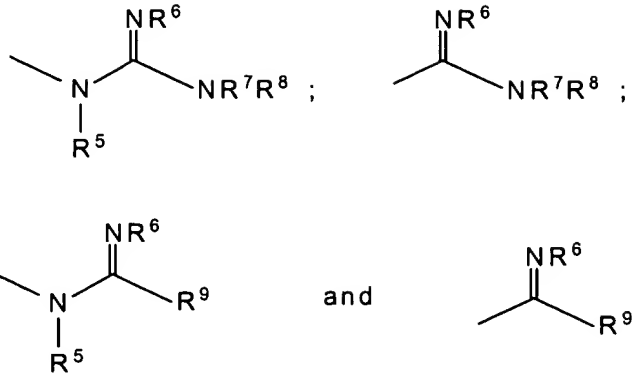
9. (Currently Amended) A compound of formula IV:



(IV)

wherein:

A is a member selected from the group consisting of: $R^2$, $-NR^3R^4$, $-C(=O)NR^3R^4$,



where $R^2$, $R^3$, $R^4$, $R^5$, $R^6$, $R^7$, $R^8$, and $R^9$ are independently selected from the group consisting of H, -OH, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where $R^6$ taken with either of $R^7$ and $R^8$, and/or $R^7$ taken with $R^8$, can each form a 5 to 6 membered heterocyclic ring having from 1 to 4 atoms selected from the group consisting of N, O and S;

Z is a member selected from the group consisting of a direct link, $C_{1-8}$alkyl, $C_{3-8}$cycloalkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{1-8}$carbocyclic aryl, or a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S;

n is 0-3;

D is a member selected from the group consisting of: $-CH_2-$, -O-, -N $R^2$, -C(=O)-, -S-, $-SO_2-$, $-SO_2-NR^2$, $-NR^2-SO_2$, -OC(=O)-, $-C(=O)NR^2$, and $-NR^2-C(=O)-$;

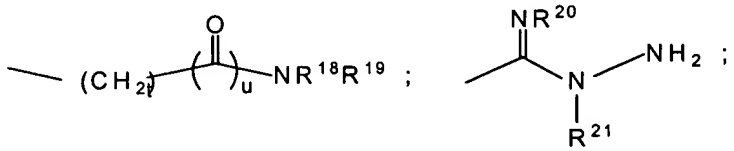
$R^1$ and $R^{14}$ are independently a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, halogen, polyhaloalkyl, $C_{0-8}$alkyl-C(=O)OH, $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl, -CN, $-NO_2$, $C_{1-8}$alkyl-OH, $C_{0-8}$alkyl-SH, -O-$R^2$ and -O-C(=O)$R^2$, an unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted amino groups are independently substituted by at least one member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, polyhaloalkyl,

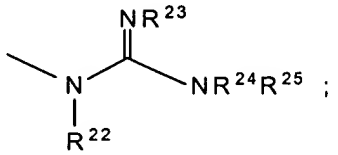
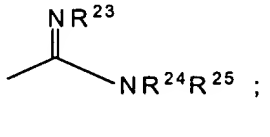
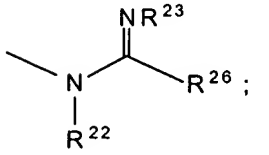
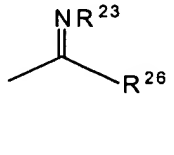
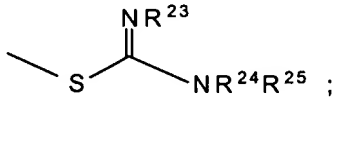
$C_{0-8}$alkyl-C(=O)OH and $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl;

q is 0-3;

$R^{11}$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, $C_{1-6}$alkylaryl, $C_{1-6}$alkyl-$C_{3-8}$cycloalkyl, -O-$R^2$, -O-C(=O)$R^2$, -$C_{1-8}$alkyl-O-$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)$R^{10}$, -$C_{1-8}$alkyl-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-C(=O)N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}$C(=O)$R^{10}$, -S$R^{10}$, where $R^2$ is as described above and $R^{10}$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, and wherein when two $R^{10}$ groups are present they may be taken together to form a saturated or unsaturated ring with the atom to which they are both attached;

G is a member selected from the group consisting of: ~~H; -CN; -OR$^{17}$;~~







and


wherein

t is an integer from 0 to 6,

u is the integer 0 or 1, and $R^{17}$, $R^{18}$, $R^{19}$, $R^{20}$, $R^{21}$, $R^{22}$, $R^{23}$, $R^{24}$, $R^{25}$ and $R^{26}$ are independently selected from the group consisting of H, -OH, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4

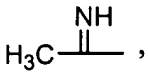
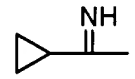
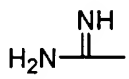
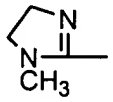
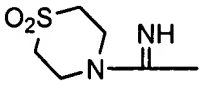
heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where $R^{18}$ taken with $R^{19}$, $R^{22}$ taken with either of $R^{24}$ and $R^{25}$, and $R^{24}$ taken with $R^{25}$, can each independently form a 5 to 6 membered heterocyclic ring having from 1 to 4 atoms selected from the group consisting of N, O and S;

~~with the proviso that when G is H, -CN, -OR$^{17}$, either E or J must contain at least one N atom~~;

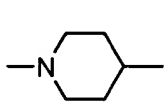
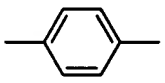
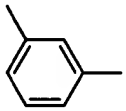
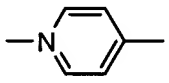
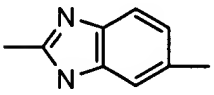
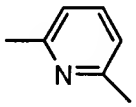
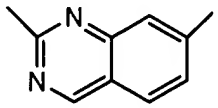
or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.

10. (Previously Presented) A compound of claim 9, wherein $R^1$, $R^8$, $R^{11}$ and $R^{14}$ are independently selected from the group consisting of hydrogen, methyl and ethyl;

A is selected from the group consisting of: -H, $-CH_3$, $-NH_2$, $-C(O)N(CH_3)_2$,





, and

;

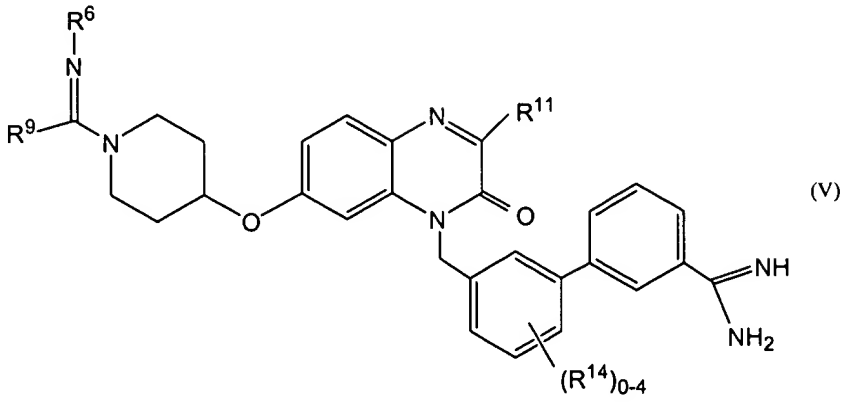
Z is selected from the group consisting of:


,

,

,

,

,

, and

;

n is an integer from 0-2; and

D is selected from the group consisting of: -O-, $-N(CH_3)-$, and $-CH_2-$.

11. (Previously Presented) A compound of formula V:




(V)

wherein:

$R^2$, $R^6$, and $R^9$ are independently selected from the group consisting of H, -OH, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and $C_{1-6}$alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S;

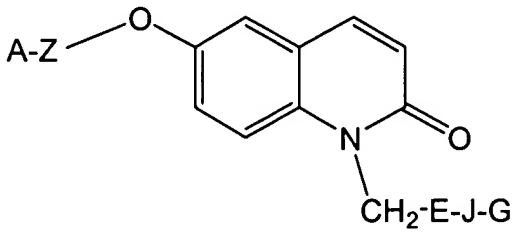
$R^{11}$ is independently a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, $C_{6-12}$carbocyclic aryl, $C_{1-6}$alkylaryl, $C_{1-6}$alkyl-$C_{3-8}$cycloalkyl, -O-$R^2$, -O-C(=O)$R^2$, -$C_{1-8}$alkyl-O-$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)$R^{10}$, -$C_{1-8}$alkyl-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-O-C(=O)O$R^{10}$, -$C_{1-8}$alkyl-C(=O)N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}R^{10}$, -$C_{1-8}$alkyl-N$R^{10}$C(=O)$R^{10}$, -S$R^{10}$, where $R^2$ is as described above and $R^{10}$ is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, and wherein when two $R^{10}$ groups are present they may be taken together to form a saturated or unsaturated ring with the atom to which they are both attached;

each $R^{14}$ group is a member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, halogen, polyhaloalkyl, $C_{0-8}$alkyl-C(=O)OH, $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl, -CN, -$NO_2$, $C_{1-8}$alkyl-OH, $C_{0-8}$alkyl-SH, -O-$R^2$ and -O-C(=O)$R^2$, an unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted amino groups are independently substituted by at least one member selected from the group consisting of H, $C_{1-8}$alkyl, $C_{2-8}$alkenyl, $C_{2-8}$alkynyl, $C_{3-8}$cycloalkyl, polyhaloalkyl,

$C_{0-8}$alkyl-C(=O)OH and $C_{0-8}$alkyl-C(=O)O-$C_{1-8}$alkyl;

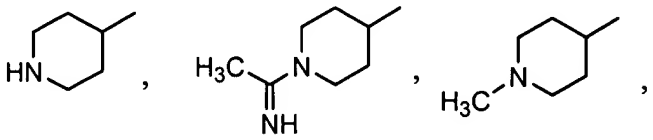
or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.

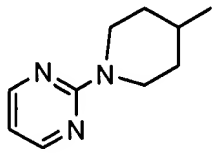
12. (Currently Amended) A compound having the following structure:




wherein:

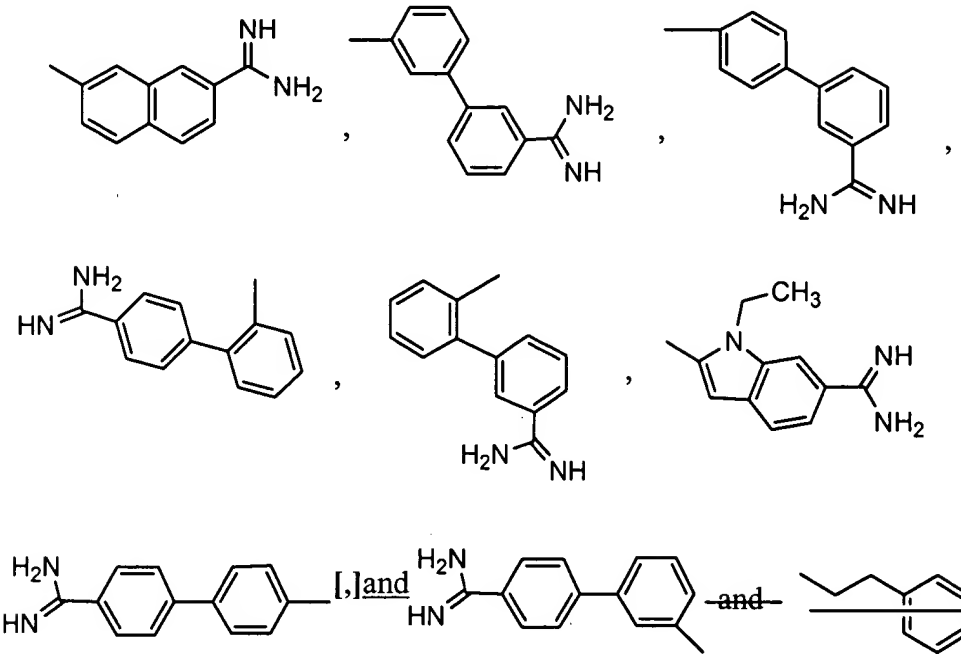
A-Z is a member selected from the group consisting of:




and 

;

E-J-G is a member selected from the group consisting of:



and all pharmaceutically acceptable isomers, salts, hydrates, solvates and prodrug derivatives thereof.

13. (Currently Amended) A pharmaceutical composition for ~~preventing or~~ treating a condition in a mammal characterized by undesired thrombosis comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound as in one of claims 5-12.

14. (Currently Amended) A method for ~~preventing or~~ treating a condition in a mammal characterized by undesired thrombosis comprising administering to said mammal a therapeutically effective amount of a compound as in one of claims 5-12.

15. (Original) The method of claim 14, wherein the condition is selected from the group consisting of:

acute coronary syndrome, myocardial infarction, unstable angina, refractory angina, occlusive coronary thrombus occurring post-thrombolytic therapy or post-coronary angioplasty, a thrombotically mediated cerebrovascular syndrome, embolic stroke, thrombotic stroke,

transient ischemic attacks, venous thrombosis, deep venous thrombosis, pulmonary embolus, coagulopathy, disseminated intravascular coagulation, thrombotic thrombocytopenic purpura, thromboangiitis obliterans, thrombotic disease associated with heparin-induced thrombocytopenia, thrombotic complications associated with extracorporeal circulation, thrombotic complications associated with instrumentation such as cardiac or other intravascular catheterization, intra-aortic balloon pump, coronary stent or cardiac valve, and conditions requiring the fitting of prosthetic devices.

16. (Previously Presented) A method for inhibiting the coagulation of biological samples comprising the administration of a compound as in one of claims 5-12.